

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE 6D.]

[illegible]

NORTH BRITISH RAILWAY.

The directors of this company (a notice of the formation of which we published on the 2d of September last) having come to the decision to

PLYMOUTH, DEVONPORT, AND EXETER RAILWAY.

A numerous and highly influential meeting on behalf of this undertaking was held at Webb's Royal Hotel, Torquay, on a Saturday morning last, and a unanimous desire to promote its completion appeared to pervade all present.—EDWARD VIVIAN, Esq., was called to the chair, who, in opening the business, said he could have wished a larger land proprietor had been placed in that situation; still, it must not be inferred from that circumstance that the landowners generally were averse to it—the contrary was the case, the proprietary in the neighbourhood being highly in favour of the line. The benefits to the inhabitants of Torquay would be of the most extensive nature, by a great influx of visitors; but those who were about taking shares should not, perhaps, look so closely to the question of dividend (though there was little fear on that score), but to the influence the line would have on the town: he would request Mr. Gill (the chairman of directors) to lay any information he might possess before the meeting.—THOMAS GILL, Esq. (M.P. for Plymouth) then detailed the history of the proposed line, from its projection in 1836 to the present time. In that year several lines were surveyed, and shares to the amount of 350,000*l.* taken up, but still it was found impossible to carry it out. In 1840 exertions were renewed, but were ineffectual; and, failing in every attempt to carry out the object as an independent company, in 1842, a provisional committee was formed, with powers to enter into arrangements with the Great Western, Bristol and Exeter, and Bristol and Gloucester Companies, and the agreements which had been entered into, he regarded as most favourable for the interest of all parties.—MR. BRUNEL described the course of the line, and stated that, although the fifty miles from Plymouth to Exeter passed through a better description of property than any similar length of line he was acquainted with, yet, with only one or two exceptions, the landowners were favourable to its construction, and though Devonshire appeared a difficult county for a railway he had not found more than the average of engineering difficulties.—Resolutions were passed expressive of his opinion that the formation of the railway would be beneficial to the county at large, approving of the course as explained by Mr. Brunel (the same as we described in a former Number), and calling upon all parties interested in the prosperity of the districts through which it would pass, and the county generally, to lend their utmost support, and a most unanimous feeling was exhibited, to carry out the proposal in a substantial and effective manner. We are sorry to observe, from the local press (and which, indeed, is not unusually the case, when any great measure is about being carried), that some parties are already endeavouring to cause division among the supporters of this line, by getting up petty opposition to the situation of some of the stations, after the most minute investigation has been given to this part of the subject by the engineers of the three companies, as well as those of the company; it is to be hoped, however, that mean opposition, by parties, evidently personally interested, will be successfully set aside, and the general interest of the line be the paramount object of those who have to carry it into completion.

RAILWAY REFORM ASSOCIATION—BLACKWALL RAILWAY

A meeting took place on Monday evening, at the George Tavern, New-road, Saint George's-in-the-East, at eight o'clock, when Dr. BLOOMFIELD was unanimously called to the chair.—THE CHAIRMAN opened the proceedings, by observing that their principal business that evening was to hear the report of the deputation which had been appointed to wait on Dr. Howling, M.P., for the purpose of soliciting that gentleman to take the chair at a public meeting intended to be called by the association, with the view of more efficiently rousing public attention to the very great abuses in the present system of railway management in this country.—Mr. MORTON said, that the deputation that day had the pleasure of a long interview with Dr. Howling; they had been received in the most courteous and friendly manner by him, and were happy to find that he (Dr. Howling) perfectly agreed with them in their object, and also approved of the manner in which the association had hitherto conducted their proceedings. They may, therefore, depend on his valuable aid both in and out of Parliament, and his assistance in getting for the public more of the advantages which railway travelling is capable of conferring on the country, especially in regard to the middling and poorer classes. He (Dr. Howling) advised them to go on in the way they were doing for a little while longer, for he was certain that they (the association) were doing great good by causing much public discussion on the subject; that a little abuse ought not to be regarded, come from what quarter it might; they should, rather, expect good from it. He (Dr. Howling) had no objection to take the chair at any public meeting the association would call, for the purpose of petitioning Parliament for a committee of inquiry into the workings of the whole railway system of this country. He (Dr. Howling) was convinced that the public had much cause to complain of the little regard that had been taken of their convenience and interests in all the railway bills that had passed through Parliament; he was, however, going out of town for a few days, but on his return, the deputation might have another interview with him, when some definite course of proceedings might be determined upon. Dr. Howling had given them some very good advice; he had reminded them that it would not be wise to seek to gather fruit before it was sufficiently ripe; that before they had a public meeting for the purpose of action, it might be well to wait a little longer in the way that they had been doing. He (Dr. Howling) feared that but little was to be expected from Government, without they were driven to it by the amount and strength of public opinion; that one great object ought to be to work upon the public mind, to create an enlightened opinion in favour of the valuable reform they (the association) were seeking. In the meantime, he (Dr. Howling) would use his best endeavours to forward the interests of all parties.

Mr. BOWENY said that it would be unnecessary for him to add anything to the very accurate and detailed account which his friend, Mr. Morton, had given of their interview with Dr. Hawling. It would completely settle the unaccountable slander about the "confederation of property," which a certain journal, through interested motives, had stated to be their object. Neither he, nor any other member of the association—nor, in fact, anybody else—had ever uttered such nonsense. The Government could no more interfere with the Blackwall or any other railway, than they could interfere with any man's private property, nor would the legislature adopt a different principle in dealing with railway property from that of any other species of property. They did not act not there for the purpose of complaining of the management of the Blackwall Railway—far from it; the railway had been productive of considerable benefit to the public; a passenger could travel now from London to Blackwall for 4d., in one third of the time which he could formerly do when cost him 6d. by omnibus—therefore, whatever might be the case with other railways, the establishment of the Blackwall had certainly been productive of good. But the question was not, had the public gained by the construction of this and other railways, but had they derived from them all the benefit which they were capable of yielding? If any arrangement could be made by which the empty trains could be filled that they now bore rattling empty by sea, the fare reduced to 1d. instead of 4d., and the unfortunate shareholders to receive a dividend who now receive nothing, could any one deny but that a great public good would be effected, which, in the words of Mr. Howard Hill, would be "second to none." The same principle was applicable to all other railways, in the same manner as the Blackwall, and he trusted that before that time twelve months the new system, as propounded by the author of *Railway Reform*, would be established, and that a poor man would be able to travel in comfort from here to Birmingham for 3s. 6d. instead of 8s., under the present system, exposed to the inclemency of the weather, superior to every discomfort and want of accommodation, at 14s. Would not such a change be most beneficial to all classes of the community? But was a prospect of such a change visionary? The best answer to that question could be, to quote the different organs of public opinion which had advanced in great scheme of commercial reform—from the *Morning Herald*, one of the great organs of the Government, the *Standard*, and the several classes. *Tail's Magazine*, the ultra supporter of radical opinions and reform in every such of the state.—Mr. JACOBSON said that the public mind required to be aroused and enlightened on this important subject; he would, therefore, to move the following resolution:—"That this association do direct its efforts to the holding of meetings in the district for discussion, and the delivery of lectures on the evils arising from the present management of railways." Mr. HOWLEY seconded this resolution, which passed unanimously.—Mr. SMITH moved the second resolution:—"That Alexander Morton, Esq., be requested to deliver a lecture at this place on Monday next on railway reform, previous from the public being invited afterwards." He knew an gentleman more capable of doing justice to the subject than Mr. Morton; the eloquent expositions which he (Mr. Morton) had in the manufacturing districts, and his perfect acquaintance with those parts where the evils of our railway system were most felt, peculiarly qualified him for commenting the pertinent task of enlightening the public mind on this subject.—Mr. WALLER seconded the motion, which passed unanimously amidst loud applause.—Mr. SMITH returned thanks for the honours done him, and would feel most happy in complying with the wishes of the association, although he regretted that he had not got quite a better chance. (N.B. &c.) It was a subject he had taken great interest in; he had witnessed much of the evil resulting from the present system, and he anticipated great good from the reform which was proposed. It was a work of time, and, sooner or later, it would be brought about.—There's having been voted to the chairman, the meeting broke up.

hour to obtain a separate line to forward the interests of parties who risk themselves aggrieved. As long ago as 1825, such a measure was rejected by the inhabitants, and in 1836 a company was formed, and surveys commenced by Messrs. Grainger and Miller—Mr. George Stephenson being employed as consulting engineer. It was called the Edinburgh, Haddington, and Dunbar Railway Company, and prospectuses were published, but from various causes nothing effectual was done. Mr. Stephenson carefully examined the line by Haddington, and that north of Garleton Hills, and gave his unqualified opinion as to the superiority of the former, as being shorter, and also as opening facilities for a larger extent of population, and taking a richer and more valuable tract of country, whilst there is not the slightest engineering difficulty in the way. The meeting was numerously and respectfully attended, and the opinion appeared unanimously in favour of the Haddington line, and a determination was passed to follow up the measures until they had secured for thatburgh as facilities of railway transit which her position justly demands. Mr. George Stephenson has been ordered to make a new survey, to enable a case to be laid before the Government engineer, who is shortly expected in Scotland on the subject, and previous to publishing the results, the company's agents were written to, stating the wish of the party to support the railway generally, and requesting to be informed if it the company's intention to take the case into consideration; the only reply was, that the line might be considered as settled to be carried north of the Garleton Hills. A deputation from the Haddington committee since waited on the directors, but without success; they only stating generally that the line should be so formed that the interests of the county did not suffer. A large meeting of the landholders will be held in a few days, who are expected to approve of the proceedings at the former meeting, and it is to be hoped the company will yet re-consider the claims of the Haddington district, to prevent much opposition and expense, and which they will obtain a line most generally adapted to the public benefit, and likely to pay the shareholders a fair interest for the capital invested.

SHEFFIELD AND CROFTON RAILWAY.—It has caused considerable surprise that the important manufacturing town of Sheffield should have left in its peculiar situation as regards railway communication. With its large population, and being the very emporium for the manufacture of articles for all parts of the world, it is certainly strange that during the formation of the great northern and midland lines of railway, the town of Sheffield should have been left out of the direct line of communication. It appears anomalous that the traveller from such a town as this, who wishes to go southwards, is obliged to submit to a journey of six miles direct north to the Masefield station, and all the unpleasantness and waste of time attendant on the use of carriages, luggage, &c.; yet such is the fact, and for all the really useful and accommodatory purposes of a railway, Sheffield seems to have been thought as little of, as any village consisting of a few cottages. It is, therefore, not surprising that a desire should begin to be expressed for this important town to join in the *real* benefits of railway communication, and for the purpose was held on Wednesday, the 25th ult., at the Cut-Hill, which was numerously attended, and resolutions were passed for a new line to connect the Sheffield, Ashton-under-Lyne, and Manchester, North Midland Railways, forming a communication from Manchester, through Sheffield, to the Midland Counties, and thus bringing the travelling facility into the town, who are taken by the present lines in a course away from it. It will also reduce the distance between Sheffield and Masefield from twenty-two miles to eleven, and open a field for the transit of mineral property, consisting of iron, coal, Derbyshire limestone, the well-known lead cokes, manufactured goods, and agricultural produce, from districts to the north. Up to the present time, been entirely lost sight of among the railway companies in this part of the kingdom. There are no particular engineering difficulties on the line; the capital required will be £50,000, in the shape of 25s. each, and from the most careful calculations, it is assumed that the traffic will certainly pay 5 per cent. on the capital though it is not improbable that it will realize much more.

ALWAYS IN IRELAND.—A proposition is at length brought before the

for the establishment of Irish railways—a measure which must carry an immense amount of benefit to the population of all the districts in which any lines may pass; while England, Scotland, and all the states aforesaid, have been doing their utmost to carry out this most perfect of discovered means of transit, to say nothing of America, who has outstripped us all, poor Ireland has been left entirely in the lurch, and, at the present moment, may be said to possess only a mere pleasure railway from Dublin, somewhat approximating to our London and Greenwich line—in addition to another short line. The prospectus now before me, making, of itself, a commencement for establishing a thorough communication throughout Ireland, appears to be drawn up on a most liberal basis, and there is little doubt but that this system of communication carried out to a large extent in Ireland, its resources would be immensely developed in a way which even the holders of land have no idea of, and the blessings to the inhabitants become incalculable. The direct line from Dublin to Cork, with branches to Limerick and Channon, as soon as the line is established, would open up a communication with all the districts of the island, and, in connection with her noble rivers, run east and west, and her principal ports, would give Ireland a chance of doing what she really is. Her resources have hitherto been but little developed, but we trust a general introduction of railway communication will, in a very short period, place her in a position of equality with England and the Empire. In this prospectus, which we are called upon to notice, there are many points to be considered, and it is not our business to detract from the merits of the scheme, but to point out some of the considerations which are involved in the execution of it. It is not our business to detract from the merits of the scheme, but to point out some of the considerations which are involved in the execution of it. It is not our business to detract from the merits of the scheme, but to point out some of the considerations which are involved in the execution of it. It is not our business to detract from the merits of the scheme, but to point out some of the considerations which are involved in the execution of it.

RESEARCH RAILWAY—(From a Correspondent)—The most com-

... has been obtained by the first application of atmospheric pres-

sometimes, by the last fortnight from delivery to Kingstown, the

we have been working regularly with a publisher and producer from the

appearance of alcohol, which proves the principle of atmospheric

12. **MASS IN SCOTLAND.**—Parliamentary action has been offered to some of the parish churches in Edinburgh for bills to be passed through them in the coming session—1. For the prolongation of the Edinburgh Glasgow Railway to the North Bridge; 2. For the erection of a railway North Bridge, Edinburgh, to Berwick upon Tweed, with a branch line to Kelso; and 3. Branch lines of railway, from the Edinburgh and Glasgow line to the Writ Sheriff at Leith, and to Greenock Pier—the portion of which are prospective in another column.

new **BRASS CUP INKSTAND**.—A very neat and superior inkstand has been introduced by Mr. James Smith, of Front-street, which has the advantage of being of the latest patented mode, without there is any complexity. It is in form of a common bowl inkstand, the cover is opened by merely pressing a small spring in front; the interior of the cup contains a rim of Indian rubber, pressed forward by a spring, which, when, accidentally meets the inkstand, preserves the contents from being poured the ink to remain in the proper position in the bowl. Previous to the ink writing work will appreciate little things, yet elegant, convenience, and the elegance of a common inkstand, placed at their command on paper in the office to those which, from their structure and complete nature, are in the first instance expensive, and afterwards continually in need of repair. It is manufactured in various sizes and also in different colors, green, grey, and blue, and will be sold most advantageously.

FOR THIS PURPOSE.—Glass's patent water filter pump is a valuable device that keeps the water, oil, grease, and mud, with the greatest possible freedom from impurities; which will render it suitable for all the purposes for which it was designed. It is a simple and efficient device, and is a valuable addition to the household. It is a simple and efficient device, and is a valuable addition to the household. It is a simple and efficient device, and is a valuable addition to the household.

HYDRAULIC RAILWAY.—(From a Correspondent.)—The success has been obtained by the first application of atmospheric pressure; for the last straight line (Hulley to Kingston), the car has been running regularly with a pressure and freedom from vibration, which gives the principle of atmospheric pressure to be fully established, and no longer a matter of speculation. It is on the experiment in such improvement is in construction, and then started out, will render this power of more importance than any brought into use; a speed of thirty miles per hour has already been with ease, and with no loss from air leakage—easier to the passenger, speed of the train is greatly reduced without his knowledge that he is taking place. Signals to regulate the movements of the carriage of the Road engine, are at present obliged to be given by flag men, even while travelling, but it is intended to lay down an automatic, by which instantaneous communication can be made between the engine and the stationary engine, and the speed regulated, on the speed of an instant's warning. Arrangements are being made to continue to Hilly, and a good and bright spot in it is the vision of Hilly has well been reported that the first successful application of atmospheric pressure to locomotion—a principle which it is probable will eventually the present mode of propulsion on our railways, and, indeed, developes marked change in our capabilities of travelling.

PROPERTY OF ENGLAND.—The lowest annual value of real property sold in England is 1841, being the county of Wiltshire, £1,000,000; the county of Middlesex, £2,000,000. In Wales, the lowest is of Montgomery, £170; and the highest is the county of Flint, £275.

MR. HENRY ENGLISH, of No. 5, SHORTER'S COURT, THORNGHTON-STREET, CITY, having, at the instance of numerous friends, made the necessary arrangements for the business of AGENT in the PURCHASE and DISPOSAL of MINERAL and other PROPERTY, as also that of STOCK and SHARE-BROKER, is induced to solicit the favour of the support of the subscribers to the Mining Journal, Railway and Commercial Gazette. The extended circle, arising from his immediate connection with that publication, may be fairly presumed to afford more than ordinary facilities and advantages in the transaction of business as mineral estate and mine agent; in which may be added, the intimate acquaintance, for the past fifteen years, with the mines and collieries of Great Britain and Ireland, as well as some parts of the Continent.

TO COAL VIEWERS AND COLLIERY AGENTS.—Required, a party competent to undertake the management of an extensive colliery in South Wales, at a given salary, or per centage on the sales or quantity raised. The party would be required to advance £1000, by way of mortgage, to be secured on the property, with interest payable thereon, as may be agreed upon—with the option, which is given time, of increasing such sum as partner—the sum so advanced being applied to the further effective working of the property, on which nearly £1000 has been already expended. The main object of the proprietors is to obtain the assistance of a practical man, whose interests should be identical with theirs.—Further information may be ascertained on application to Mr. H. English.

VALUABLE COLLIERY IN DURHAM.—Mr. English is empowered to treat of the disposal, by public contract, of a valuable and highly important coal and iron property, situated in the county of Durham, with the option of securing an 800 acre concession. These mines, varying in thickness from four to seven feet, have been proved in strikingly full strata, and there is also abundance of ironstone, fire-clay, and building stone on the property. The town named for the entire purchase is £1000, including outlay for buildings, engine gear, &c.—Satisfactory returns will be given for the present proprietors wishing to dispose of the estate, and every information afforded on application to Mr. Henry English, at his office, 5, Shorter's Court, between the hours of Ten and Five.

SOUTH WALES.—ANTHRACITE COAL-FIELD AND IRONSTONE MESAURES, WITH VALUABLE ADJUNCTS.—Mr. English is authorized to enter into arrangements with parties for working an extensive field of anthracite-ironstone, fire-clay, and building stone lying in the immediate vicinity. The locality presents more than ordinary advantages, while the coal is proved to be of a superior quality, whether for steam or other purposes.—Reports and estimates may be inspected on application to H. English, 5, Shorter's Court, Thorngorton Street, between the hours of Ten and Five.

Surveys and reports made of mineral property, as well as plans and sections carefully laid down.

* Plans, estimates, and reports of mineral property, upon being transmitted to the office, are duly registered.

H. English's Court, Thorngorton Street, Oct. 28.

HALL OF COMMERCE, AND GENERAL SUBSCRIPTION ROOMS, LONDON.

BOARD OF SUPERINTENDENCE.
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The HALL OF COMMERCE has been erected to provide a central point of meeting in the commercial world for the merchants, bankers, shipowners, manufacturers of the United Kingdom, exporters of goods, foreigners engaged in commercial or other pursuits of the public in general.

The READING ROOM is provided with all the leading foreign and British newspapers, and general commercial intelligence from all parts of the world, maps, charts, itineraries, directories, steam-boat and railroad information, list of ships sailing to all parts of the world, prices-current, documents and books of reference on commercial subjects.

There are also rooms for PRIVATE BUSINESS, and FIRE-PROOF VAULTS and SAFES for the deposit of valuables.

In addition to the above conveniences, the subscribers will have the use of an EXCELLENT LIBRARY on COMMERCIAL SUBJECTS.

The subscription will be conducted by the proprietors, under the superintendence of a board of subscribers.

TERMS OF SUBSCRIPTION PER ANNUM.

Persons residing in London, or within twelve miles £1 10 0

Persons residing at a greater distance £2 10 0

London, September 1.

The board of superintendence of the Hall of Commerce take leave to draw your attention to this institution. It has been built and established at a very great cost, by a single individual, for the convenience of the commercial community of the city of London, with a degree of public spirit worthy the metropolis of the world.

The subscription is now placed on an eminently secure as to be an object of consideration in proportion to the convenience offered, which is not only for the present generation, but the benefit of all generations, that, without interfering with any of the existing establishments appropriated to specific branches of trade, these conveniences may be found available by a very large body of persons in the city of London, by persons visiting London occasionally on mercantile affairs, and by gentlemen from the Continent and other foreign parts.

GEORGE LARSEN, Chairman.
JOHN CATTLEY, Deputy Chairman.

N.B.—A coffee-room is now open for the accommodation of the subscribers.

TO ARCHITECTS, SURVEYORS, BUILDERS, AND OTHERS.

PATENT METALLIC CEMENT.—The proprietors of this

VALUABLE CEMENT (which is prepared from a metallic sand, similar in quality and chemical analysis to the best Italian portland cement, after ten years' experience of its excellent qualities, can now, with the fullest confidence, recommend it to the attention of architects, builders, and the public generally, as being superior to, and stronger than, any other cement in use. Its strength and durability in this cement closely resembles the best Portland cement; it is most improved, both in appearance and durability, by exposure to the weather, requires neither colour nor paint, and remains entirely free from the green taint produced by vegetation. The metallic cement, when used as an external surface for houses and other buildings, is not liable to be affected by the action of frost, inasmuch as it is of a nature to resist the action of water, and is in addition to the numerous trials made of it in this country, and without having covered the slightest injury, the severity of the climate of New York. It is entirely free from those cracks and fissures which disfigure houses covered with other cements, and is so perfect as to render it almost impossible to separate it from the bricks, stone, or other materials upon which it has been laid. When used as an internal surface for walls, staircases, passages, &c., it will be found to possess great advantages, and can, if required, be finished up to a fine equal to that of marble. The extreme beauty and durability of the architectural embellishments which have been executed in this material, warrant the proprietors in claiming for it a marked and decided superiority over all other cements, and they can with the utmost confidence refer to very extensive and highly enriched buildings, in which the whole of the architectural finish of metallic cement has been employed, and the entire cost of the work has been reduced to one-third of the cost of the same work executed in the best stone or marble. Employed as a concrete for foundations, or as a mortar for brickwork, in the erection of bridges, viaducts, tunnels, &c., the metallic cement is perfectly adapted to all other marine purposes, from the extraordinary resistance qualities, the extreme hardness which it ultimately attains, and the facility with which it can be applied. In construction of this cement, the proprietors refer to the numerous testimonials and reports from the London and Birmingham line of railway, and to the foundations of the new Victoria Railway, which have been formed entirely of metallic cement. The metallic cement is found of peculiar advantage when mixed with Roman cement, as it is perfectly prevents expansion, and the ground down which is to erect a time is exhibited in that material.—References and further particulars may be obtained, and estimates sent, on application to the Metallic Cement and River Lime Works, 4, New Bond Street, London. (See prospectus sent on request.) or of the Messrs. C. Dyer, 4, New Bond Street, London.

IRON TRADE.—We understand Messrs. Telford and Lee, of Chester Mass, Cumberland, are building two furnaces to reduce the red hematite ore, under a patented process.

THE IRON TRADE OF THE CONTINENT.—(From a Correspondent.)

Our letters from Brussels state that the annual exposition is used to take advantage of the transit offered by the German railways, which are now open to supply that country with iron for some years to come, a first assignment being calculated on of 35,000,000 kilograms, which has been waiting the partial opening of the railway to undertake the commitment. The Belgian iron manufacturers are on the alert, and several have come to Brussels to have an interview with M. Nathusius or M. Remigoy on the subject. They complain much of the manner in which the duties are levied in France, 45. etc. being charged for iron of the first casting, and 145. for the second, which amounts to a complete prohibition; and for overburdened goods the same surcharges in weight—a crown engine, for instance, of 10-horse power, is generally set down at 1000 or 1050, and they state that if this state of things continues these iron-works must cease. The Congress of the Deputies of the Chamber of Deputies has been sitting for a month past at Brussels, and which was to have broken up on the 24th ult., but the negotiations have, up to the present time, remained in character. As, however, considerably more than 100 English vessels could not land this enormous quantity at Antwerp, the Belgians are willing to make the most of the opportunity to get back of their hands, and this enables them to continue operations until a better state of things shall arrive.

RAILWAY.—It is confidently rumored that this line will be extended to Paris—that is, providing the council and trade will afford due aid to a party of London gentlemen, who are desirous of giving the project their support.

LONDON AND CARLISLE RAILWAY.—There appears to be no doubt now that this line will be speedily carried into effect; the shares are all taken up, and negotiations from the provincial committees attended a general meeting on Thursday, at Liverpool, at which the proper action was taken up, and will be delivered in due season.

NOTICES TO CORRESPONDENTS.

The Mining Journal is regularly published about Two o'clock on Saturday afternoon, at the office, No. 25, FLEET-STREET, where it can always be obtained and there is no charge for irregularity in its supply, in towns, other than in the part of the agent through whom it is ordered; but, on requests its transmission to country subscribers, the charge is shared with the Post-office authorities.

THE HAPPY LAMP.—We have been favoured by Dr. Reid Chancy with one of his latest improved Lamps (a notice of which appeared in our columns a few weeks since), and which we shall have great pleasure in submitting for inspection to any parties who may call at our office, more especially to those connected with coal mines, and who may thus assist in the prevention of some of those appalling accidents which are so often detailed in our columns.

THE IRON TRADE.—We feel indebted to those correspondents who have favoured us with particulars of the different districts with which they are connected; but our returns are not yet sufficiently complete to present so perfect a statement as we could wish.

MINING IN PENNSYLVANIA.—We have received several letters with reference to the note attached to the mining intelligence from this neighbourhood, inserted in our last issue—and we may state, with reference to this, as also to others of similar import, that it was in no way intended to throw discredit or doubt on the observations of our correspondent, but rather to ease ourselves of the responsibility of having acknowledged as correct, information to which the name of the author is not publicly attached, should the latter be verified. We may, however, observe, that in the case of the latter, as in all others, the writer is known to us, and we have reason to place credit in what he has asserted to be true—and of which, indeed, we have received additional confirmation.

T. W. (Eggle).—The notice of the dinner given by the Duke of Richmond, on his visit to the Strathmore manganese mine, has lost all claims to novelty, from the time that has elapsed since its occurrence, or we should have had pleasure in recording the interesting particulars furnished us. The event must have proved equally satisfactory and pleasing to the noble donor and his guests.

We have received Messrs. De Fay and Co's Manchester Trade Report for November, which presents the usual valuable epitome of statistical information, and which must prove of the utmost importance to parties interested in the cotton trade, &c., on which principally treats.

THE HYDRAULIC RAILWAY.—In an article which appeared in our last week's Journal, under the head of "Railways, British and Foreign, &c.," some observations were made on Mr. Shuttleworth's invention, in the course of which it was observed, that the yards of driving pipe per mile would work the system on his improved plan. This improved or completed method was explained in a letter given us on the 10th inst. (March 11), when it was shown, that on this plan about 200 yards of driving pipe per mile would work the system with full effect—that is, in either direction—being, of course, 400 yards for the two lines of rails, which are equal to two parallel miles of way. This was illustrated by a diagram; and, as the writer of the article last week referred to the letter above alluded to, the patentee wishes it should be pointed out, that the mistake in the statement in our last, as regards 400 yards, has arisen evidently either from imperfect recollection or a slip of the pen. Nearly 500 yards of driving or propulsion pipe per mile, 500 yards, to be exact, appeared to be requisite before the inventor fully perfected the line of working by steep, ascending inclines, alternating with long, gentle, descending ones. The patentee's very powerful propulsive agent would clearly be called into requisition only to carry the trains up the short ascending inclines.

"ILLUSTRATED MANAGER."—The November Part of this beautiful work is more than usually interesting, both from the variety of its literary contributions, and the number and excellence of the illustrations with which they are accompanied. We trust the spirited efforts of Mr. Douglas Jerrold (whom we are right glad to find restored to health) are satisfactorily compensated by general public appreciation—from the excellence of his productions, we believe none deserve it more.

WEST INDIA MAIL PACKETS.—We have received a synopsis, in one sheet, with coloured diagrams, which exhibits, at a view, the present routes, rates of passage, freight, postage, course of post, &c., with times of arrival and departure, of the West India Mail Steam Packets. It has been recently printed and published, under the authority of the directors of the company and the Lords of the Admiralty, and will be found highly useful for the counting-house and the library, as also for the information of persons interested in the transit of passengers and goods across the Atlantic to the shores of New Spain and the West India Islands. The distribution of the mails for the 2d, 17th, and 24th of each month are clearly distinguished, by coloured and well arranged tables for the outward, inward, and homeward directions. The expense of passage and freight is also given for all the inter-colonial as well as transatlantic voyages, with the cost of refreshments on board, Post-office regulations, &c., and forms, upon the whole, an interesting and complete directory to this part of the world—which has, within a few years, been brought, by the vast improvements in navigation, within easy reach of England, and the rest of Europe.

Remind.—W. H. P.—J. J. (St. Collett).

More extensive premises than those lately occupied being found necessary, the establishment of the Mining Journal is REMOVED TO 26, FLEET-STREET (opposite St. Dunstan's Church).

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, NOVEMBER 4, 1843.

* Parties desirous of ordering the Mining Journal, can do so, either direct to the office, or through any news-vendor or bookseller in town or country. Notice of irregularity in its delivery are requested to be forwarded to the office, where every endeavour will be made to rectify the cause of complaint.

The Ticketing Paper of sales at Swansea, in our present number, demonstrates most fully, and we may add, alarmingly proves, the advances making by foreign mines, to the destruction of our home industry. The sale this week amounts to 1714 tons, yielding the sum of 31,002*l*. 13*s*. 6*d*.; that advertised for the 8th, 1453 tons, which, at the same average, would give 26,362*l*. 10*s*.; and, on the 22d, the quantity advertised for sale is 2241 tons, amounting to 46,612*l*. 10*s*.—the three sales, being effected in three weeks, and the quantity announced for sale 5410 tons, which, taken at a like average price, would give an aggregate for the three weeks, or say a month's sale of 97,937*l*. 13*s*. 6*d*. When it is considered, that the produce of Cornwall is, say 900,000*l*. a year, as exhibited by sales at public ticketing, it must be apparent that this influx of foreign ore is equal to far more than the production of the county, and hence the state of our home mines, and, as the smelters would lead us to suppose, their own depressed position.

We had prepared some notes with reference to the smelters, the "strike," and the state of the copper trade, the insertion of which, for prudential reasons, we deemed it desirable to hold over until matters as between the masters and men had been settled; this having been now accomplished, although we are not assentients to the course pursued, we shall resume the consideration of the subject, being fully convinced—that the conviction we before entertained being confirmed—that the smelter has the power in his own hands; he can define the price at which ore are sold—he can command the market, as a merchant; if that the importation of foreign ore for home consumption has militated against him, we have only to repeat, he has himself to thank—having been too anxious to reap profits, without regard to the interests of others.

The affairs of the British Iron Company, we are glad to find, are approximating to those beneficial results we have ever anticipated from the success which has attended the project of the formation of a new company, giving, at the same time, the advantage to their original shareholders who may be disposed to invest further capital. The capital of the company, it will be remembered, was 2,000,000*l*. or 20,000 shares of 100*l*. each; on these shares 70*l*. has been called—thus raising a sum of 1,400,000*l*. Certain monies or claims on the present company now exist, and with the view of paying off such amount, as well as obtaining sufficient funds as a floating capital—the plant being secured by the arrangement existing, which may now be said to be carried out—a new company has been formed, with a capital of 400,000*l*. or 4000 shares of 100*l*. each, the provisional committee being formed of parties of the highest character, whether as connected with the mercantile or mining interest, some of whom are, we are glad to find, practically conversant with the iron trade.

The amount to be paid for the purchase of the works is 300,000*l*., the remainder being available for the prosecution of the undertaking, the works being capable of producing 45,000 tons per annum. It appears from a notice in our columns of to-day, that a sufficient number of registered shares have been subscribed for by the proprietors of the old company, and that the "New British Iron Company" may now be considered to be formed. We must, however, refer those interested to the advertisement.

The improving state of the iron trade has, doubtless, given the company a "lift" in its projected increase of capital, whereas, to proceed—the arrangement made with the body of proprietors being at the moment when the price of iron was most depressed. We trust, however, we have seen the worst; and, with works of the magnitude such as the British Iron Company possess, with practical experience, and the command of capital, we can readily imagine that it will not only maintain its position, but, with the advance in price, yield to the shareholders a return, which will fully justify the course now pursued.

We are glad to find, from the several communications we have received, that the subject of Accidents in Collieries is likely to attract public attention, and that our efforts will, in the end, be crowned with success. We have, during the past week, received from more than one member of the Court of Aldermen the assurance of support on the measure being brought forward in the Court of Common Council, who, it is presumed, will present their report to the Court of Aldermen, with the view of the recommendation of the Court being carried out—no question existing as to the vote at which it will arrive.

We are collating all the information in our power, and court the assistance of those connected with collieries, more especially in the north, to forward us information, which will enable us to render the memorial to the QUEEN complete—at least, so far as describes the fearful accidents which have arisen.

It is with sincere pleasure we state, that, since our notice, we have also received the promise of several members of the Legislature that they will support any measure which may be introduced for the protection of the working collier; and we have every reason to believe that her Majesty's ATTORNEY-GENERAL will lend his aid in the introduction of a bill in the House of Commons. Under such circumstances, and with such prospects, we have only again to express our hopes, that those interested and possessing the means will render assistance in the good work. We court information, which shall be acknowledged, and, where available, promptly acted upon.

We are sorry to learn that the royalties announced for sale in the county of Cork have been withdrawn, or rather, we should say, the sale has been postponed until January, in the absence of any offers. This is to us a source of regret, as we were induced to hope, even if English capital was not forthcoming, at least that Ireland possessed sufficient enterprise (!) to secure a mineral property of such extent as that presented—in the expectation that the time is not far distant when the Sister Isle (which is acknowledged to abound in mineral wealth) would be a rival in the market with our more fortunate foreign competitors.

We observe that the Bearhaven Mine sold ore to the amount of 2456*l*. 15*s*. this week, the produce being 10*l*. to 10*l*.; and a small parcel from Ballymurtagh obtained higher prices than we have been in the habit of seeing. We trust this is attributable to an improvement in the lode, as, in such case, we may look to the county of Wicklow, with its large extent of mining ground, as likely to add to our mineral produce—attention having, for the past two or three years, been more particularly directed to the sulphur ores, with which the lodes abound.

We last week offered some remarks on the amalgamation of contending lines of railway, or such as may be considered to form an integral part of a whole—as, for instance, the London and Greenwich line with those of the Croydon, the Brighton, and the South-Eastern Railways. Every one, we believe, whether interested or otherwise—if we may except the disputants, whose conceit far exceeds their wisdom—arrived at the conclusion that unity of action was necessary for the interests of the proprietors of the respective lines, as well as being advantageous to the public; but obstinacy in some instances, and love of power in others, have had the effect of subjecting the several lines to an outlay by no means warranted, excepting in support of the several peculiar views entertained by the directors. It is with pleasure we learn, from a source on which we can place full reliance, that the southern lines—that is, the Croydon, Brighton, and Dover—have had meetings and consultations, with the object of effecting arrangements with the London and Greenwich line, by a joint tax being paid on the number of passengers carried, according to the respective classes of carriage—thus, as we conceive, placing the matter fairly—that is, assuming the terms proposed per head shall be so considered by the parties, and giving to the proprietors of the London and Greenwich line a rental or return according to the extent of which the other lines may avail themselves. A difference of opinion may—and, doubtless, will—arise, whether it would not be better to have accepted a certain annual rental for the use of the line; but, with the conflicting opinions which are entertained as to the contemplated traffic, we cannot but consider the proposed arrangement the most desirable. We hope next week to be in a position to state particulars.

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From the annual return of the state of the weekly make of pig-iron in Scotland, it will be observed that—although there are nine furnaces less in blast now than in September last—the make is only reduced by 270 tons. This may be accounted for, from the make of some of the works having been put down in September below their average, and from the make at those works which have blown out furnaces not being proportionately reduced—for the extra power of blast enables them to produce more iron per furnace. The produce of three furnaces at each of the works of Dundy, van Goven, and Monkland, is used in the manufacture of bar-iron at the Clyde Iron-Works, and the produce of one furnace at Monkirk is also so applied.

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MINUTE ON THE EXTENT OF COAL-FIELD IN NORTHUMBERLAND AND DURHAM.

The base line assumed, in the estimate laid before the House of Lords, by Mr. Hugh Taylor, in 1829, was as follows:—"From the mouth of the Coquet, in Northumberland, to Castle Eden, in Durham, a distance of forty-eight miles." The view then taken has been remarkably verified, by pits being sunk close to the Coquet on the north, and workings are now in progress, which prove that the coal-field extends, at least, two miles to the south of Castle Eden, beyond which, southwards, no explorings have been made; but, from the depth and inclination of the coal beds, there is every reason to conclude that they continue much farther in this direction. The estimate referred to gave a thickness of twelve feet of coal or eight feet of available mine; but, according to Mr. Buddle's synopsis, the average thickness throughout the coal-field is twenty-four feet. This increased actual thickness shows that the estimated duration of 1727 years was formed, as intended, upon a most moderate calculation, and with the additional coal-field since ascertained, fully warrants the estimate standing in its present state, even though the consumption has increased from 3,500,000 tons to 6,000,000 tons; a portion of this increase, however (342,438 tons) consists of small coals exported foreign, which were formerly wasted. The following are the respective depths at which the coal has been sunk to along the east coast:—

1. NORTHUMBERLAND.		2. DURHAM.	
Coquet	80 fms.	South Shields	200 fms.
Corse	100 "	Monk Wearmouth	253 "
Hartley	80 "	Morton Winning	229 "

The foregoing indicates an inclination of the coal-measures to the south-east, which is the general dip of the strata in this district; and, as the depth of the sea, within twenty miles of the coast, does not exceed forty-five fathoms, or, indeed, in any part across, is not more than sixty-five fathoms, there is every reason to believe that the formation extends considerably beneath the German Ocean. Taking the same eastern base line, as before explained—namely, fifty miles in length, it would require an extension of little more than 14½ miles into the sea to obtain an area equal to the unexcavated tract of coal in the estimate—namely, 732 miles, and which, in the advanced state of mining science, engineering, and machinery, will, doubtless, be wrought when circumstances require.

J. BUDDLE. H. TAYLOR. G. JOHNSON.
N. WOOD. T. J. TAYLOR.
[The correspondence in which we are indebted for the foregoing particulars has also favoured us with a plan of the coal-fields of Northumberland and Durham, for which we beg to tender him our best thanks.]

AMERICAN MINING STATISTICS—LEAD TRADE.

[We quote the following particulars from the "Notes of a Man of Business," dated New Harmony, Indiana, Oct. 1, published in the last Number of the *Liverpool Times*.]

Pig-lead raised and melted in Galena can be sold in the Liverpool market at any period of the year with a good profit to all parties, all expenses paid, at less than 15s. per ton. In the winter, pig-lead may be bought in Galena at 1 dollar 75 cents; shipped in the spring to New Orleans for 20 cents; and sent from thence to Liverpool, as ballast, free. In this case, it might be delivered in Liverpool, insurance and duty paid, at 11s. per ton. This is manufactured without the aid of other machinery than the pick, the shovel, and common hand windlass, and smelting-furnaces of a very inferior description.

The mining district of Illinois, Wisconsin, and Iowa, alone surveyed by David Dale Owen, is larger than all England and Wales together, containing seams, beds, and veins of coal, iron, lead, copper, limestone, common fire and porcelain clay, sand, zinc, and other minerals inexhaustible. The mining district of Missouri is probably more extensive, and is known to have been partially worked by the Indians and Spaniards for 300 years. There are large quantities of iron and coal in Ohio. In Tennessee and Kentucky, charcoal iron can be made cheaper than in other countries; it can be made with coal. Wood fuel can be had for 62½ cents per cord, 4 ft. by 4 ft., ready for use, and is delivered at the furnace mouth for 1s. per ton. There are immense beds of iron ore in these two states. In Pennsylvania, the iron and coal are even more plentiful than in Wisconsin, &c. The nominal wages of workmen in the mines, and at the smelt-works and iron-works, are very little higher than they are in England, but the workmen obtain at least three times more of all the necessities of life for their money than they do in England. The credit system is nearly abandoned in the states, and a great deal of the business done is by barter. Clothing, ironmongery, groceries, &c., have been reduced in price almost as much as food, and American manufactured goods, as well as British, are sold in the shops, for cash, nearly as cheap as in England; and, as the Americans are making the greatest efforts in the west, as well as in the east, to increase their own manufactures, it is folly to expect that England can long compete with America in her own territories. The democrats have elected a large majority of the Members of Congress, whose creed is free trade, and no duties but what are necessary for revenue; but I hear so many different opinions on this subject, that it is difficult to form an opinion as to what may be the result. The manufacturers, and iron and lead makers, will fight hard for the present tariff, with, I believe, few exceptions. My impressions, from all that I have seen, are, that America can at present successfully compete with us in some mineral and many manufactured articles, and that, in a few years, it will be in their power to drive us from most of the markets of the world—our only chance of meeting them is by exorcising our burdens, and carrying out immediately the principles of free trade.

ELECTRO-GALVANIC BLASTING.—We last week gave a description of a new application of the conducting power of water, by Lieut. G. R. Hutchinson, R.E., which we now find General Pasley, after trying a number of experiments, has become satisfied is a novel and ingenious mode of firing submarine charges—viz., by a single conducting wire, making the sea complete the voltaic circuit, instead of a second wire—and is, upon the whole, much more convenient, though by no means more efficient, than his former method; and that he has, therefore, ordered all the double conducting voltaic apparatus before used at Spithead to be altered to single ones on this new principle, which, however, is not suitable for the submarine explosions, because earth is a much weaker conductor of electricity than water. A person of the experiments tried by Mr. Bain last year in Hyde Park first led Lieut. Hutchinson to this improvement—but that both earth and water are conductors of common electricity at very great distances had been practically proved by Dr. Watson nearly a century ago, as will be seen by referring to the *Transactions of the Royal Society for 1758*; and water was afterwards proved to be a conductor of voltaic electricity, by Alford and others, about forty years ago. We mention this, not out of disrespect to Mr. Bain, whose mode of proceeding, by using plates in addition to wires, is a great improvement upon that of former experimenters, but because a dispute as to the priority of other important inventions depending upon electro-magnetism has taken place between him and a justly celebrated professor, upon the merits of which we have no wish to offer an opinion.

REMARKABLE CAVE.—A correspondent says:—"We visited a wonderful cave under Loughborough, which has been explored for a thousand years, but we contented ourselves by going only two-thirds of the way, or 700 yards. The roof and sides are covered with stalactites, some of which are transparent, and produce musical sounds, of great variety, from that of a peal of bells, musical glasses, China going, to the hollow bang, and they assume every fantastic form you can imagine, from icicles a yard long to the appearance of teeth, bee hives, figures of men and animals, with beautiful drapery and fine network. The roof is ornamented with crystals in every order of architecture. Post-holes or candle-holes were all over the cave, as if it were a dwelling. A gentleman told me quite that he had seen all the finest caverns in the world, and there was only one superior to it—*the Cliff, Dorsetshire*."—*Liverpool Times*.

ENORMOUSLY SUPPORTED CEMENTAL ACTION IN ROCK SALT.—A curious discovery has recently been made as to the extent of the red pillars of the rock salt removed from the Panjab, supposed to be composed by oxide of iron. This turns out to be in reality caused by the reaction of fossil infusoria, which, though now in a pretty pickle, have all at one time been alive. The red matter seems to be silicious, and is not acted upon by acids or caustic alkalis. This fact has, for some time, been familiar to naturalists in consequence to much of the rock salt found in various parts of Europe—it is so compacted and now is verified in that of the Indian country.—*Bromley Times*.

STATIONARY ROCK.—On Saturday last, a strong rope was made at the rope factory of Messrs. Smeeth, Crompton, and Vigney, of Haverly, which measured 1000 feet in length, 1½ inches in circumference, and weighed upwards of five tons; more than 3,000,000 feet of rope were consumed in its manufacture. It is for use of the Indian plains on the Haverly Railway, and in weight and size exceeds any railway rope of which we have heard. It is, probably, the heaviest ever made in the country, and reflects credit on the rope, Mr. Vigney.

UNDERGROUND.—A pair of shafts of 100 feet, of the same of Messrs. has recently been put in, and is now in progress, for the purpose of power, in a mine. It shows water at twenty-two feet from the surface, and there is a great distance. The shaft is about 240, and it possesses an hydraulic power equal to a large engine working 1750 or 1800. An experiment was made in the presence of a large number of men, and gave good results.—*4. post Times*.

ORIGINAL CORRESPONDENCE.

UNITED MEXICAN MINING ASSOCIATION.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—As the period of the annual general meeting of this concern approaches, the proprietors naturally are anxious for the fulfilment of the chairman's expectation of the payment of the balance still due upon the red scrip shares. Mr. Moore may rest assured that he has the sincerest thanks of the great body of shareholders, for having expressed his sentiments so strongly upon the subject at the July meeting, and the directors cannot perform any act that would be more acceptable than an early compliance with his wishes. The despatches from the mines since Midsummer have advised some heavy remittances, and the cash balance in the hands of the board must have considerably increased, notwithstanding the monthly drain of 10000, for shipments of quicksilver; and I should, therefore, hope, that the directors are now in a situation to declare and advertise a dividend of the remaining 14 per cent. still due upon the red scrip certificates. Should there, however, still be a deficiency of the regular funds for the purpose, I would take leave, most respectfully, to suggest to the directors, in order to effect an desirable object, to lay hold of the unclaimed dividends. It appears by the report in July, that upon the auxiliary loan and the red scrip shares, there then remained upwards of 20000, unpaid, although upon the former more than two years, and upon the latter six months, had elapsed, since the last advertisement of dividend had been duly published. The probability is, that no demand will ever be made upon the company for this reserved fund; but, to put the matter beyond the possibility of dispute, it might be prudent to invite all persons duly entitled to send in their documents, within, say one month from the date of such advertisement, upon pain of payment being otherwise deferred until further remittances arrive from the produce of the mines. I submit, that no injustice whatever would thus be done to the parties, and, as I do not anticipate any considerable claims, the effect of the plan would be, to place such a sum of money at the command of the directors as would enable them, in the month of December, to get entirely rid of the actually existing and vital remainder of the debt, and set the concern free for the general distribution of ensuing profits amongst the proprietary at large. AN OLD MEXICAN.

Oct. 30.

MR. S. B. ROGERS'S DATA FOR BLAST-FURNACE MANAGERS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I greatly regret the non-appearance of Mr. Rogers in my request of the 2nd ult. I have read his valuable treatise on blast-furnace management more than once, and with close attention, and should have been glad to have been favoured with his views of the hot-air application, in reference to the tenderness of the iron commonly produced from it. I deplore, in common with many others of your readers, I am sure, the worst and ridiculous controversies which have so frequently appeared in your Journal, arising very often, no doubt, from the indulgence of a disposition for display, or an inclination to cavil—waiting your valuable pages, and gratifying one or two themselves. I cannot suppose that Mr. Rogers could hazard an exponent of such a nature, for his exposition being merely elucidatory, and of a purely scientific character—not entering at all into any party question of comparative value—would not be likely to provoke a controversial attack. Your correspondent's contributions are estimated too highly to be in danger of such treatment, or of being lightly caught at. There are opinions held—and by sensible persons, too—not agreeing with some of those promulgated in the "Data"; I can adduce one instance, in which a very talented individual (the late Mr. David Mushet, with whom I was acquainted) entertained a very different view from Mr. Rogers on the force of blast delivered into furnaces.

Mr. Mushet, in his *Papers on Iron and Steel* (published posthumously, if I mistake not, by his son), by a course of very conclusive reasoning, advocates a strong pillar of blast, especially for coal similar to that of the South Wales district. This will be found at page 322 of the work, and is well worth referring to by any interested person among your readers who may not have read it. It will be needless to remark, that Mr. Rogers has expressed himself favourably to a soft pillar of blast—or, rather, to a much lower one than is ordinarily used. I name this, certainly not with any intention of finding fault with Mr. Rogers, or to provoke a reply from him, but to show one instance of a contrary opinion in regard to his views—and I know of others—and yet no one has ventured to call in question the correctness, in any part, of his "Data." On the point referred to, my experience leads me to the belief, that a strong pillar of blast is generally the most beneficial, although there are cases in which Mr. Rogers's argument holds good. I estimate very highly Mr. Rogers's labours in the present instance, and hold in too high respect the clearness of his views, and the usefulness of his work, to disturb for a moment the favourable reception it has met with; and this feeling, if I mistake not, is entertained by all its readers.

Mr. Rogers will, I trust, permit me, in reply to his remark, to observe, that it does not appear to me that a "remedy for bad or impure iron" is the question—but, rather, what is the cause of tenderness in hot-blast pig-iron, a defect well known to exist in iron of the purest quality so produced? This is the point to which I wished to draw the gentleman's attention; and I flatter myself he will think again about it, and that the result will be a compliance with my request. It will be evident to you, Mr. Editor, how injurious, in every point of view, some of those controversial attacks which have appeared in your Journal are; for here, you see, is an instance of one of your estimable correspondents being backward in expressing his views on a subject of importance, from an apprehension of being forced into a prolix controversy. It is due, however, to yourself to say, that you have taken great pains to free your publication from these annoyances; and, such has been your consistency and firmness, that you appear to have succeeded. Your columns are too valuable to be occupied by useless disputes—and their interest, which is continually increasing, cannot fail to be appreciated, and your labours rewarded.

A SUBSCRIBER TO YOUR JOURNAL FROM ITS FIRST APPEARANCE.

Nonconformist on Type, Nov. 1.
[We readily add our testimony to the interest which Mr. S. B. Rogers's valuable "Data for Blast-Furnace Managers" created; and also our solicitation to him, for explanation on the subject alluded to by our subscriber, as such cannot fail proving of great value—and, we are sure, would be too highly appreciated to provoke a controversial attack.]

TEMPERATURE OF MINES—VENTILATION.

SIR,—In your report of the speeches at the late Cornwall Polytechnic meeting, John Taylor, Esq., of the United Mines, is said to have observed, that "the temperature at the United Mines had increased very much lately, and somewhat alarmingly so; because its effects had been felt in the health of the men." They had had this summer more young men disabled from the effect of working in a heated atmosphere at a great depth than they had ever heard of before, and one of their agents was directed last week to observe accurately the temperature in the deep parts of the mine. In the cross-cut north, at the 104 fathoms level, the temperature of the air was 100° F., while that of the water issuing from the rocks, where the men might be said to be working in a perpetual shower-bath, in which the steam was much more oppressive than they were in the habit of enjoying in their own rooms, the temperature of that water was 90. In another part of the mine, which was rather deeper, the temperature of the water was 87 only—which was rather a curious fact—and the temperature of the air was proportionably less also. This temperature was higher considerably than in the bottom levels of the Trevelyan Mine, and somewhat higher than in the bottom of the Cornish, although very much deeper than the United Mines were; and, finding the great sufferings of their men from the heat, it became a consideration that the adoption of some means of relieving them could not be long postponed. The ventilation was perfectly good, the stream of air was abundant, the candles burned well—it was only the extreme temperature, and the great height which the men had to climb, which were felt as increasing evils.

With all due deference to Mr. Taylor, the fact of candles burning well is, perhaps, not a positive proof that the mine is perfectly ventilated, as it is well known that even one wire will burn in oxygen gas! The converse, however, holds, that if good candles will not burn, when lighted, the air is too impure for healthy respiration, which, to the honour of human nature, Mr. Taylor, as an employer, is desirous the men should have, although there are quite applicants enough for the places of those who die off, like rotten sheep. Though the stream of air is abundant, the high temperature of that air is a proof, unless the ground is very hot, that the circulation is not from the under air, where the ground is not very hot. By a meteorological table, constructed from observations made at Falmouth in the year 1841, it appears, that the highest temperature at the surface was 72°, and lowest 52°—the average maximum being 60°, and the average minimum 48°; the mean difference between day and night being 12°, the highest difference in July 18°. Now, Sir, comparing 87°, 80°, 50°, or even 70°, with 100°, there is a vast difference in excess of temperature. Mr. Taylor, it is true, speaks of the "summer months"—and so do I. But the temperature of the water is higher in mine than in all water. But, again, the heat escapes into the surface air. I would, perhaps, not be so advised to draw out the heated air, and so much of it as possible by night, so as to have the benefit of 12° in summer. How is this to be done—by an air-bomb, with a large vertical opening or chimney on one side, and a wheel, 16, 20, 30, or 40 feet diameter, as shown in my model at the last Polytechnic meeting, where I was prevented from completing the final provision by an erroneous assumption as to the prior publication of details (in your *Journal*), and a little special pleading, which I hope to get over, as Mr. Charles Lumsden (the president) and the judges have manifested every disposition to do me justice. Although it would seem that there is nothing new under the sun, I might go on to show that there is nothing like my plan—either in heaven above, or in the earth beneath, or in the waters under the earth—but this would not be to the point, prior to the judges' report, and, therefore, although I am very much tempted in this respect to worship the altar of my theory as an efficient ventilator for mines, I refrain.

Falmouth, Oct. 28.

ALFRED T. J. MARTIN.

GEOLOGICAL NOTICE OF THE SOUTH WALES COAL-FIELD.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In the last *Mining Journal*, you have inserted a paper on the geological characters of the boundary of the South Wales coal-field, being the substance of a lecture delivered at the Mechanics' Institute, Cardiff, by Mr. A. O. Davies. I have read it with very great pleasure; and, if he would follow up the survey, and describe distinctly where we are to find the crop of each different vein of coal and mine round the whole extent of the basin, he would do a great service to this district—a service he appears to be quite capable of performing. But there is one vein of coal workable, on the east end of the basin, which he has left out, and I have no doubt of its extending through the whole length and breadth of the coal-field, which I shall describe below.

Mr. Davies says, the lowest workable vein of coal at Risca is called the sun vein, at Pontypool the stone vein, at Nantyglo the four feet vein, at Cyfarthfa the Gellydydd vein—and, he may have added, at Blaenavon, Vartog Golyons; Abercynon and Pontypool, the old coal vein—the whole, under different names, is one and the same vein of coal. Under that vein of coal—some places ten, some places twelve, and others thirteen or fourteen yards—lie the courses of ironstone, known as the bottom vein mines, and next under those mine veins lies the rock that Mr. Davies calls the Farewell—that is to say, "Farewell, coal and mine." At this work there has been worked a vein of coal more than forty years last past, 9 ft. 2 in. in thickness, under the rock Mr. Davies calls the Farewell Rock—the rock that lies upon it being sometimes eight, ten, twelve, and I have seen it in one place eighteen yards thick, from the 9 ft. 9 in. vein of coal up to the bottom vein mine. Mr. D. has described that rock as to character, &c., very well, but you will perceive he has given it a wrong name, because it cannot be called "Farewell, coal and mine," when there are other veins of coal and mine under it. I once sunk an engine-pit (which said pit is at work now) forty-five yards below the bottom vein mine, and I will give you a section of the measures from the bottom vein mine downwards.

Yds. Ft. In.	
Strong clunch and mine ground to big vein mine—a coarse mine	2 0 0
Rock upon the 9 ft. 2 in. vein of coal, called by Mr. Davies Farewell	0 0 0
Vein of coal	0 0 0
Immediately under the coal, a rock, having strong clunch partings	10 0 0
Vein of coal	0 0 0
Rock, mixed with strong clunch	0 0 0
Vein of coal	0 0 0
Strong clunch, partly fine-grained	0 0 0
Kind working mine ground, with balls of excellent value sprinkled through	1 0 0
It, but too far apart to work	14 0 0

Total depth of the sections below the bottom vein mine.... 44 2 11

At the bottom of the fourteen yards of mine ground we were upon a very strong rock, nearly forty-five yards under the bottom vein mine—that is the rock, I think, which should be called the Farewell Rock. The rock at the bottom of the engine-pit is a millstone grit, and lays upon the upper strata of limestone; the thickness of it here is from thirty-nine to forty yards, making the whole distance from the 9 ft. 9 in. vein of coal to the limestone about twenty-two or twenty-three yards. There is a tunnel here, 2200 yards in length, driven through the mountain, for the convenient transit of limestone from the back of the mountain to the works; 1800 yards of the tunnel is driven in the 9 ft. 2 in. vein of coal, and, consequently, under the rock Mr. Davies calls Farewell. The 9 ft. 2 in. vein of coal being under all other workable veins, and having such a strong rock upon it, it frequently extends a great distance further than does the bottom vein mines. Blaenavon furnaces are situated at the extreme crop of the bottom vein mines, but the 9 ft. 9 in. vein of coal, as it covers more than a mile from the works in a north-east direction, crops out beyond the ridge of the Gales, on the Risca mountain.

Mr. Davies observes, that twice the quantity of ground must be shifted on the north side of the basin than on the east, to get the same quantity of mine. I think not. I think there is as much mine in the cube yard of working ground on the north side as the east—what I intend to say is, there is as much mine in the quantity of ground turned over, to get at the mine at Blaenavon, as there is at Blaenavon, or Twpn Harlow; the difference in the thickness of the whole strata from top to bottom of the minerals neither adds to nor diminishes the quantity of mine in the working ground; the veins are as near together in the regular working mine ground in one place as the other.

The supposition of there being such a striking difference in the whole thickness of the mineral strata at Blaenavon and Twpn Harlow must have arisen from the great difference of inclination of the strata at the two places—at Blaenavon, the inclination, perhaps, does not exceed three and half inches in the yard; at Twpn Harlow, it inclines, perhaps, twenty inches in a yard. That very sudden cropping out of the lower veins would deceive; for the upper veins lying back on the slope of the mountain—no such on, that they crop more over the bottom of the basin, and lie more level than do the lower veins of their crop, far below on the side of the mountain—would make it appear, without great care, that the whole mineral strata, from top to bottom, is thicker than it should be.

TUGHMAN DRANKIN.

Blaenavon, Oct. 20.

THE STEAM-WHIM AT STRAY PARK MINE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Having heard that there was something said in your valuable Journal of the 10th August last respecting a steam-whim erected in April in Stray Park Mine, I was desirous of seeing it, and have to-day for the first time read it. The whim in question was erected by Mr. Nicholas Vigney, junr., at the expense of his father, Captain Nicholas Vigney, and draws the whole of the staff of that mine, at per month, Capt. Vigney paying all cost of working the engine—viz., coal, oil, tallow, engineers' wages, hemp, &c., together with chains, 1200 to 1400 fathoms for the whole, drawing from five shafts—and gives, I am informed, great satisfaction to the manager and captains of the mine. I have been told, from good authority, that the sum paid is not more than the expense of working one of the best engines doing the same quantum of work. The engine is 24 inch cylinder, 6 ft stroke, 7 feet on the crank, and turns the cage at every stroke; it is a handsome engine, well erected, and no doubt works very economically. It appears that the Stray Park adventures are great galeers by this mode of employing the machine, which is as completely under the control of their agents as though it were their own property. Some have said that Captain Nicholas Vigney is not likely to get rich by the transaction; he, however, offers to erect another on the same system. I think that any person wanting such a machine would do well to know his terms; and no doubt but the manager at Stray Park would afford any information as to its performance, which six months' experience will have enabled him perfectly to judge.

ECONOMIST.

Cambs., Oct. 13.

RAILWAY IMPROVEMENTS—RAILWAY REFORM.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Having read that excellent pamphlet, which seems to form the subject of controversy with public writers, called *Railway Reform: its Necessity and Practicality Considered*, I cannot resist taking the opportunity of offering to the writer of this work the acknowledgments which I, as well as all others interested in railway undertakings, most feel at the close observation, and accurate judgment, which he displays for a great public benefit; but as his calculations were given previous to the important advantages being known of Payne's method of preserving timber, and its applicability in wooden rails as a substitute for iron, thus rendering it so much superior for comfort and economy, and, when united by a still more recent invention, patented by Mr. Pinner, for a safety level wheel for railways, I am quite convinced, where he has had time to investigate these two new processes, he will be able to offer to the public an edition, with these most valuable additions considered, and thus give a turn to the affairs of railway companies severely to have been looked for.

A RAILWAY SHAREHOLDER.

Richmond, Nov. 3.

RAILWAY IMPROVEMENTS—BLACKWALL LINE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I believe that there are but very few parties, except those immediately interested, who have any idea of the situation in which the holders of shares in the Blackwall Railway are placed. It is briefly this—A large capital, upwards of a million and a quarter, has been sunk, from which the proprietors do not derive one farthing benefit, nor is there any prospect of their affairs being improved. This unfortunate state of things does not arise from want of proper management, but through a deficiency of traffic. This, however, is not the worst—our income does not meet our expenditures—and, at the last half yearly meeting, the excess of the latter over the former exceeded 50000. The railway is being worked now, not, properly speaking, for the proprietors, but for the mortgagees, to whom all the revenue of receipts, after deducting the working expenses of the line, is virtually paid. How do our shares stand in the market?—unusually at 75 per cent. discount, but few can be disposed of even at that reduced sacrifice. Our only chance of success—or, rather, the only chance to save the shareholders from absolute ruin—is, by adopting some improvement that would increase the traffic and decrease the expenses.

In my letter to you last week, I referred to a "proposed amicable call," for which a patent has been taken out by a Mr. Pinner, and which I considered particularly applicable to the Blackwall Railway—that is to say, if it possesses all the qualities which the publisher asserts it does—viz., cheapness, durability, and so much a carbon as iron. That it possesses all or any of these qualities, I am not prepared to say, but I think it well to notice the subject, for the purpose of drawing the directors' attention to it, and to satisfy themselves whether or not the invention would be applicable to the Blackwall Railway. Should the directors find that the invention does not possess the qualities asserted to it, they will, of course, reject it; but, otherwise, I trust they will adopt it. The very necessity of converting our wooden rails, the constant, the absence of the eternal single and double which must cost as long as our rails are used, would induce thousands to take a trip on the Blackwall line at present under 1000 of it.

A LANCashire SHAREHOLDER.

City, Nov. 1.

THE PRECIOUS METALS OF MEXICO.

IMPROVEMENTS IN METALLIC INSULATION BY GALVANISM.—At the monthly meeting of the Liverpool Polytechnic Society, held at the Royal Institution, the paper for the evening was read by Mr. Spencer, on some new electric arrangements, which led to the wonderful results already produced in this interesting science, and will probably lead to great improvements in its art of working in metals by this noble agency. After an able introductory address, in which Mr. S. called attention to the improvements in this science from the commencement, he explained some experiments in which he had been deeply engaged, and which were likely to prove of much importance. He first described an arrangement, consisting of a piece of varnished copper placed between two walls of moist clay; this combination separates two sides from each other, the poles of a galvanic battery being led into each of them; when this contact had been kept in action some weeks, it was found that one side of the piece of copper was practically dissolving, while the other was fully ready to go in increase at the other—the copper itself having lost its communication with the battery, being only in the line of the current. Next this newly-discovered action, he found had been indeed electrically played an important part in the transference of metals in solution, since from one part to another, whether night be the distance of the formation of the element. He had already applied the principle to the reconstruction of photographic plates, which have the battery in a most conveniently polished state, far greater to anything that can be accomplished in the usual way; and, from any chemical purity, and equal reason, are far better fitted for the purpose than those prepared by mechanical means, and the arrangement is of that simple nature as to dispense with the usually complicated array of binding wires and wires, in passing to the cathode, and he would on every failure positively take place. Some curious modifications of this principle were given; as it is a curious fact, not to be kept confining to a fluid for any length time, and its action regulated like a clock, and the results of another experiment were most extraordinary. A narrow and long glass tube through he divided into four cells by three porous earthenware diaphragms, two and a half inches apart, and each had an aperture the size of a half penny; the size of a powerful battery was placed at each end, the positive being silver, and the negative platinum. In the first aperture next the silver pole was placed a piece of gold, in the with a piece of silver, and in the third a piece of zinc; the fourth was now filled with a solution of potassium, made slightly, he perceived afterwards, and the various action seemed to go on in the middle, the results being noted at intervals. After a variety of singular experiments, the gold had at length become so the piece fully occupied by the zinc; the latter metal had engulphed the zinc, and the zinc was found engaged on the potassium, or negative pole; these extraordinary results, with, as said, led to further experiments. Mr. Spencer then explained how any object, or other work of art, may be dissipated by the electrolytic process, space only be deposited either in a brittle state or otherwise; the brittle state may then be quenched, and, consequently, dissipated in both a brittle state being either used and afterwards heated or quenched in a quick heap, its structure consolidated, and, by constant repetition of the process, the most useful and perfect shape of a larger work may be obtained. The lecture gave much satisfaction, the audience critically scrutinizing the said experiments and distributions and before the evening.

of the committee of the French Institute, consisting of M.M. Berthier, Dumortier, de Beaumont, Bonassolignat, and Berquerel, have reported on a work written by M. St. Clair Dupont, entitled *De la Production des Métaux Précieux au Mexique*, in which they state that Baron Humboldt, in his political essay on New Spain, has given a report of the mines in Mexico, their produce in precious metals, the average per centage of the ores, the annual consumption of mercury for amalgamation—in short, the quantity of precious metals exported from New Spain since the conquest until 1813, the epoch of his return to Europe. The war of independence, the political changes, and other consequences dependent on that, having caused great modifications in the production of the mines generally, it became necessary to resume the subject where Baron Humboldt left it. This M. Dupont has done in a very elaborate work, which was referred to the present committee. M. Dupont having resided the last sixteen years in Mexico, having relations with the principal mining companies, and being concerned in the refining of the Mexican coins, was in the most favourable condition, not only to study, but also to introduce improvements in the metallurgy of silver. To obtain these ends, he has visited at different times the principal metalliferous deposits from Yasco to Guadalupe y Calvo, in the states of Sonora, and Chihuahua, a distance of more than 6000 kilometres. The observations he has collected on geology, mineralogy, and metallurgy, are contained in this work, which will be reviewed in the order adopted by the author himself. The only reports of Mexico we have up to this great time are some remarks of Bonassolignat published towards the end of the last century, those of Humboldt, and lately M. Burkart. M. Dupont has particularly devoted his attention to the metalliferous formations, which, according to him, are difficult to distinguish, either from their age or their mineralogical nature. The principal rocks in which the argentiferous lodes occur are talpase and clay slate, the diorite, the gneiss of some similarity with the Jura formation, and occasionally a porphyry; the volcanic rocks, with the exception of those of Balam, rarely contain silver. Mexico has been divided concerning its temperature into three different climates—the cold country (*tierra fria*), temperate country (*tierra templada*), and warm country (*tierra caliente*), where vegetation is most active; it is in the second that almost all the metalliferous deposits are found, and which M. Dupont has divided into four principal classes.—1st. Deposits existing in rocks, constituting themselves a chain of mountains, such as Real del Monte and Pachuca. 2d. Lodes existing in rocks differing from those in the principal chain, as Guanaxuato and Taxco. 3d. Lodes found in isolated hills, as Zacatecas and Catorce. 4th. Lodes found in level countries, as Ramos, Fresnillo, and Paterson. Nearly all these lodes run between the south and the east; those that are richest run nearly north-west and south-east. Their inclination is more northerly than southerly, and the angle is rarely more than 45°. The principal metalliferous deposits are in lodes; generally, the metallic beds are less abundant. The size of the lodes differ from a decimetre to more than forty metres, as at Guanaxuato; but that is most remarkable, the walls and roof of the lode are frequently impregnated with silver, as well as the surrounding rocks, to a distance of one or two metres. As to the quality of the lode, whether it increases in richness from the surface in depth, M. Dupont has remarked that there is nothing decided on that point. The silver, in general, however, is found richest at a depth varying from 100 to 400 metres—on the contrary, the workings of the Sonora and the Chihuahua are richer nearer the surface, to a certain limit, beyond which the product diminishes; this circumstance, coupled with the increased cost of working, and the expense of furling the water, is the cause of the abandonment of the deepest mine in Mexico—the Valenciana—which is produced so richly, the depth of which is 600 metres. M. Dupont considers the lodes as presenting two defined zones in their descent from the surface. The first is composed of ores called colorados, owing to the colour which is given to them by the presence of hydrated peroxide of iron, which formed of greyish quartz, the cavities of which are filled with metallic oxides. The second consists of the minerals which are denominated negroes, on account of the dull colour they receive from the sulphurets of lead and zinc. M. Dupont imagines that in both zones the metals have been, in their primitive state, sulphurets, but in the colorados the atmospheric agents have given way to a chemical action, which has produced new combinations. It is to be remarked, that in this zone the colorados is less deep, as well that the lode is of a more resisting nature. When quartz is predominant, and the metallic sulphurets are less abundant, the decomposition only reaches a few metres; but, when the lode contains lime, and the pyrites and other sulphurets abound, the decomposition sometimes attains some hundreds of metres. The composition of the argentiferous minerals of Mexico were not well known in Europe previously to M. Dupont having caused to be analysed, by European chemists, samples taken from a number of quartzites collected from the principal formations of Mexico, such as Guanaxuato, Zacatecas, Pachuca, Fresnillo, &c. These minerals differ little from each other in their nature; they are, in general, composed of compact quartz, dotted or veined with metallic matter. The true pyrites, which always is predominant, is frequently accompanied with bitumens, siliceous, and galena, and, at the extreme point of disintegration, metallic silver, sulphuret of silver, and red silver, rarely the chloride of silver, or the boracate, the existence of which has been proved by one of the chemists employed in making the analysis. The analysis of these minerals cannot but interest the explorers; besides the advantages that can be drawn from a true knowledge of their composition, they can, by mechanical operations, such as a methodic washing, or any other analogous method, obtain the stones which contain nearly all the metallic substances. When a concentration can be effected, a great progress will be made in the metallurgy of silver. The metallic deposits which have particularly drawn the attention of M. Dupont, and on which he has made his observations, are those of Guanaxuato, Zacatecas, Fresnillo, Berchreitz, Catorce, Guadalupe y Calvo, Yasco, Ramos, Angeles in Balam eps, and Caliente. He has entered into details of the subterranean workings of the mines, their surface operations, the transport of the ores, &c., &c. Regarding the fires necessary to use, whether by water or by mechanical trituration, he proves that steam can be used in very few localities, on account of the almost total want of fuel. Fresnillo, Sonora, and Real del Monte, are the only explorations where this has been usefully employed; without that the first of these mines, taken in 1841 and 1842 furnished one-eighth of the silver produced in Mexico, but have been abandoned. At present 100,000 kilogrammes of the minerals are worked in forty-eight hours. The remembrance of the immense benefits derived since the first exploring of the silver mines in Mexico induces, at the present time, speculators to form new establishments the instant they meet traces of lodes which only give feeble indications of richness, but if explorers were better informed than they generally are, by collecting statistical facts correctly drawn up, the cost of extraction, mode of treatment, probable advantages which would result from it, a geological knowledge is extended then, that which is to be found in the country, guided only by such data, they could commence enterprises which often, if understood, as the rule of companies, and selfish capitalists, at first reduced only by loss of gain. In this report, the work of which we are about to speak, cannot but be useful to them; M. Dupont has treated the question of the position of gold and silver previous to the conquest, without entering into details so diffuse as those of M. de Humboldt. By his account, the earliest mines understood to prepare their precious metals by washing, if we can judge from the proportion of gold, relative to that of silver, in the ore of Cortes. In the first part of the letter of Cortes to Charles V. this proportion is stated as from 1 lb to 3, and very different to what it is at present. As soon as the Spaniards became masters of the country, they commenced treating their minerals by fire, but the process was at first very deficient, on account of the scarcity of the fuel, and in some localities the want of it, and the absence of all water power. This was expended on machinery of the amalgamation *à patio*, which only required 1 to 100 lb of fuel for the value of the silver, which permitted the extraction of the ore from the mineral when the metal to be extracted by fire, was in the use of Europe. Three methods as present are used in Mexico—fire, amalgamation (*patio*), and hot amalgamation (*patio*). The *patio* is the most important; without the improvement of this method the produce would be trifling. The treatment by fire is very expensive, on account of the cost of combustible and water power, the imperfect construction of the furnaces, which have received some of the latest ameliorations, and the expense of the flames—they could only be employed with rich ores. The flames are large and rich in carbonic acid (furnace gas), which is found in some quantities in the vicinity of the workings. The cold amalgamation (*patio*), has particularly drawn the attention of M. Dupont, who has combined nothing on which could be established on this subject. He has given the price of the ingredients, namely salt, sulphuric or sulphate of copper, and mercury, and has well and wisely shown the localities where each can obtain the salt that is necessary. The price of the salt of Colima, at Guanaxuato or at Zacatecas, is 100 pesos the Spanish quintal, or about 400, for 100 kilogrammes. The salt of Colima, which after the latest analysis, only contains 4-5th of the chloride of sodium, and more at Zacatecas produces the 100 lbs. of salt, which, salt of Colima, will be about 40 pesos. M. Dupont also liberates others on the method of preparing the sulphuric in the different districts, such as Sonora, Guanaxuato, and others less important. The sulphuric employed at Guanaxuato contains 4-5th of sulphuric sulphate of copper; it is formed of two parts of sulphur and one part of iron. The sulphuric is prepared with such care that the impurities only contain four parts in 100 of the weight of copper, and as amalgamation was discovered, the Government purchased them of a monopoly of industry. The notice that M. Dupont has supplied in his work shows the influence that the economic lowering of price, agreed to by

the court of Madrid, has exercised on the production of silver in Mexico. In 1796 it fell to 43 piastres 36 cents the quintal, which price it retained until the independence of Mexico. When the commerce was thrown open, the price of mercury varied from 56 to 70 piastres. This state of things remained until a powerful capitalist being appointed superintendent of the produce of the mines at Alamos, the price rose to 120 piastres, and even 150 piastres, as the mines were more or less distant from the sea; this high and exorbitant price has not a little contributed to paralysis, or at least retard, the metallurgy. M. Dupont gives thus, the history of Mexican amalgamation, is commencing by describing the mechanical operations, the different phases of operation, as well as the theories which have successively given to this ingenious process. He shows us that Smee's method, considering the nature of marine salt, and the metallurgy as bordering on the electro active elements which these compositions contain. M. Karsten announcing the facility which a solution, saturated with marine salt, has to dissolve the chloride of silver, and the influence of the bicarbonate of copper. All these successive discoveries are the basis of the theory of amalgamation, but there are yet a quantity of facts to which we are indebted to M. Dupont, and we shall proceed in a following Number to detail as clearly and briefly as possible the principal phenomena of amalgamation, such as he has described them.

[Note.—A Kilometre is 1000 metres, or about 1600 yards.—A kilogramme is 1000 grammes, and a gramme is 2 Nos. weight.]

ON THE METALLIFEROUS CONTENTS OF LODS.

"On the Relative Position of the Yellow and Vitreous Sulphates of Copper in the Lode of Pembroke Mine." By R. Taylor, Esq., F.G.S.—I am induced, by what fell from the president during a conversation with him respecting the local relations of the yellow and grey copper ores in the mines of this county, to offer this brief notice of the very striking differences in the character of the ores contained by the lodes which were formerly worked in the Pembroke Mine, and now in Boscardine, one of the Charlestown Mines, which I have observed as the workings of the mine have advanced westward. In the eastern part of Pembroke, which is near the cliffs of St. Austell Bay, the ore was a strong yellow sulphuret; in the central portion of Pembroke Mine, black and grey ores occurred as well as yellow; in the western part of the mine, the black and grey ores prevailed, although the veins still produced some yellow sulphuret, particularly where it was worked to the greatest depth. In Boscardine, which is considerably further west on the course of the same lode, some rich bunches of grey copper, accompanied by black oxide of copper, have been found at shallow levels; associated with these ores were yellow sulphurets, containing an unusually high produce of copper, and being thickly coated with grey and black ore. In this locality, however, a still more remarkable change occurs in the presence of tin in considerable abundance, in some places constituting portions of the lode distinct from those containing copper, but in others intimately mixed with the richest portions of copper ores. The farther progress of the works westward has proved the almost entire disappearance of copper from these lodes, while they have become regularly productive of tin. The remains of some ancient workings at a short distance further west than those recently made, and, although still in kilns, being on the flank of the granite hill, on the summit of which the celebrated Carnarvon mine is situated, show no trace of copper, and present the mineral characters which are common in tin lodes of that district. Parallel to the mine which I have here noticed are, on the north-east, Crinnis lodes, and on the south, the very large and rich lode which formerly produced copper in such large quantities in Great Crinnis Mine, situated on the cliff of St. Austell Bay, and has in later years been extensively worked for tin in the Charlestown Mines. I have good reason to believe that changes in the metalliferous contents, very similar to those I have described as occurring in the Pembroke lodes, characterise those which are parallel to them in this locality, but I have not had the same opportunity of tracing them in their whole course; I may, however, notice, that so completely has the Great Crinnis lode changed its character as it has been explored westward, that in the Charlestown mines I have not found it to contain any copper, except in a few hand specimens, in which very thin flakes of native copper have been found curiously interspersed in hard tinstone. I regret that the haste with which I have been obliged to prepare this brief sketch has not allowed me to do more than to notice generally some of the most striking features of this case, as I am aware that to be of any value many and precise details are requisite—descriptive of the variety in the earthy mineralisation of the veins; of the disturbances in their course, occasioned by cross courses and nodes, which in this case are very considerable; as well as of the character of the including rocks. There is one circumstance which it is right that I should particularly mention, as we are taught by Mr. R. W. Fox to consider it of importance in the explanation of the changes which may have occurred in the metalliferous contents of lodes subsequently to their original position; this is, that the kilnas in contact with those parts of the lodes which contain the grey and black ores are stained a bright red colour—this is remarkably the case in parts of Pembroke Mine and in Boscardine, but not invariably so, and I am inclined to think that this staining does not extend to any great depth from the surface, even although the veins continue to contain grey ores.—*Trans. of the Geological Society of Cornwall.*

AMERICAN COAL TRADE.—The Cincinnati *Chronicle* assigns appropriate importance to the coal trade in the Valley of the Mississippi, which, although it is the least important in the world, is destined to become the most important in this country. In the year 1833, there were exported to New Orleans from the interior 94,139 tons of coal, while during the present year, the receipts there from the same quarter amounted to 255,566 bushels—being a two-fold increase in two years. The *Chronicle* remarks that the trade in Western coal at New Orleans, however, is only an evidence of the increase, not of the quantity. The consumption of coal at Cincinnati is four times that of New Orleans, and the imports of the trade has been nearly as great.—*Miners' Journal* (U. S.)

THE IRON TRADE.—We are happy to have an opportunity of announcing the starting of a new forge at the Diwails Iron Works, which commenced working on Wednesday, the 25th ult. An immense mass of building and machinery, consisting of twelve puffing furnaces, with steam-engines, boilers, cast, rolls, &c., was put into operation, to the heartfelt satisfaction of all who witnessed this addition to the means of obtaining a living by the hard-working population of the district. Sir J. Garret, with his two eldest sons, as on the premises by ten o'clock, and inspected the whole of the works, which are erected in the most substantial style; and at eleven o'clock, four little Garret, Esq. (the eldest son) turned on the steam, when the gigantic machinery commenced its operations in the most efficient and satisfactory manner, and three balls of puddled iron were rolled into bars, amidst the loud cheers of the assembled multitude. About forty gentlemen, connected with the works, sat down to a splendid supper, after which sociability was kept until a late hour, the principal expression of feeling being—surrounds to the Diwails Iron Works, and the important additional sections just opened.

LOCAL NEAR PONTYPOOL.—NEWPORT AND NANTYGLA RAILWAY.—A line of coal was discovered lately on the property of Charles Williams, Esq., Cwmbrydion, in the neighbourhood of Pontypool, which measures seven or eight feet. The contemplated line of railway from Newport to Nantygla runs through the land; and when this vein is worked, as it will soon, probably, be the case, a few more tons will be thrown into the scale of argument for carrying out that necessary undertaking—the Newport and Nantygla Railway.—*Montgomeryshire Merlin.*

THE SILVER TRADE.—According to the *National*, the indemnity awarded the English merchants lost by the monopoly of the sulphur trade in Sicily (190,000 Neapolitan ducats, these creditors demanded 6 per cent. interest) the Neapolitan Government has determined on paying them ready money. **EAST WYOMING RISES SILVER LEAD MINE.**—A correspondence informs us that a considerable amount of work has just been completed by the promoters of this undertaking after getting up a shaft, 150 fathoms below the head of 17th st., while it is estimated that the profit for the months of September and October will fall little short of \$100,000.

SERIAL THEFT. It is rather dangerous for a Journal to make itself vehicle of one of those pieces of news, whose character necessarily is itself to awaken the suspicion of most readers; we, therefore, deem it right, giving the following account, to state that we do not make ourselves responsible for its truth in any way, merely repeating what has been related to us a person whose veracity has been hitherto unimpeached. Our informant states that a party of engineers are at present engaged at Macmillan in the extraction of an aerial machine, the principal of which, an Italian, has remained long in England (the classic country of numbers industry), in which he studied the elements of the theory which he is now attempting to put into action. The phenomena of their experiments is situated at Notre Dame de la ville, and we are told that the attempts of the experiments have not been rewarded with success. Their machine represents a bird: it shape, and bears some resemblance to the one so well known in England: the wings, composed of a slight frame of woodwork, covered with silk, are about to be fixed to the body of the machine, and three or four more wings will suffice to bring work to perfection. Paris, we are told, is to be the first place to witness the wonderful party, who hope to accomplish their flight is from four to seven: the time of day fixed for their departure is the evening. No one is to be admitted to participate the dangers and unusual triumph of the experiment, but a young lady, who has lately become the wife of one of the party, is last circumstance creates the interest created by this extraordinary situation—of which, we repeat, we do not assume the responsibility.

